MAXXSONICS

MX SERIES

OEM INTEGRATION ACCESSORIES

MX-1 / MX-2
MX-3 / MX-4

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MX OEM ACCESSORY OVERVIEW

Maxxsonics OEM Accessories are the answer for getting more power and better sound from an existing car audio system when it is improbable, impractical and sometimes just impossible to change an aftermarket head unit. The following is a brief description of each MX OEM Accessory. More detailed information is included in each models' individual section.

**MX-1 & MX-2 models feature Maxxsonics' innovative Audio Signal Sense. This feature allows for the MX Controller to turn on when speaker audio signal is detected by the unit. This feature will then send signal to the amplifier in line automatically turning the unit on as well. Audio Signal Sense has a 60 second window from the time that signal ceases to when the MX Controller and amplifier power down. This feature is included so that your controller and amplifier do not power down in between tracks or while changing discs etc. (Both MX-1 & MX-2 feature Audio Signal Sense as well as standard Remote wire capabilities.)*

MX-1 Premium High-to-Low Level Converter:

Easily add an aftermarket amplifier to any OEM radio system with this deluxe line-level controller that converts factory high-level speaker wires into unbalanced low-level (RCA) outputs.

MX-2 Deluxe High-to-Low Level Converter:

Conveniently converts a stock head unit's speaker wire signal (high level) into an RCA (low level) signal for use with an aftermarket amplifier.

MX-3 Bass Controller:

Working in conjunction with an aftermarket radio and amplifier, the Bass Controller takes the designated radio subwoofer or full-range stereo output from the radio and processes the low frequency bass notes. In turn, this enhances the bass response, increases linearity, buffers unwanted transient noise and improves the frequency range for overall improved bass quality.

MX-4 Add-A-Sub High-to-Low Level Converter

This unique Controller provides the ideal way to add more bass without changing an entire OEM radio system.

MX OEM ACCESSORY SETUP

To test speaker channel voltage, first you'll need a DMM set to measure AC voltage. Play a musical track on the radio. Turn the volume up to maximum undistorted level (by ear). Measure at the speaker or the wire. Dial your interface box accordingly.

INSTALLATION

ASSEMBLE TOOLS AND ACCESSORIES:

Wire Cutters/Crimpers/Strippers

Digital Multi-Meter

Supplied Screws

Supplied Allen Wrench

Small Flathead Screwdriver

Wrench For Battery Post

Drill With Phillips Bit

1/8" Diameter Heat Shrink Tubing

18 Gauge Power Wire(Application Appropriate Length)

18 Gauge Ground Wire(Application Appropriate Length)

18 Gauge Remote Wire(Application Appropriate Length)

PLAN YOUR SYSTEM LAYOUT:

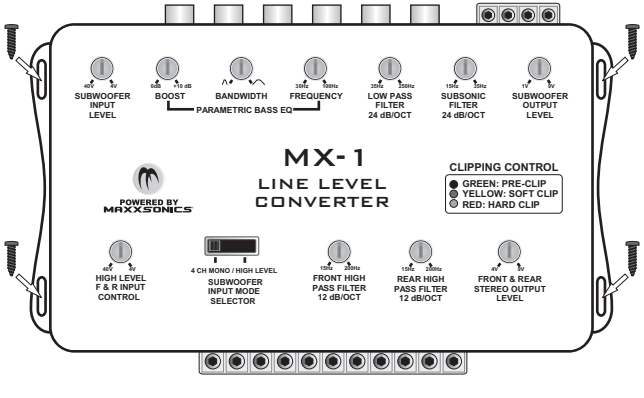
Prior to installing your MX-1, be sure that you have identified a good mounting location that will allow for easy access to make adjustments. Determine the best routes for your wires and lay them out before permanent installation.

IMPORTANT GUIDELINES:

- Read the entire manual prior to attempting the installation.
- Run all RCA's so that they are far from any high current wires.
- Always inspect an area prior to drilling. Avoid cutting or drilling into electrical wires, fluid lines and gas tanks.
- All power wires connected to the front battery should have the appropriate fuse in line within 12" of the battery terminal.
- The ground connection integrity to the chassis is very important. The best way to achieve a good, solid electrical and mechanical contact is to use a large round crimp lug, crimped and soldered to the ground wire. Then scrape or sand the paint off of the vehicle chassis, slightly larger than the ground lug, at the connection point. Drill a clearance hole in the chassis, the same size as the lug hole, and use a bolt, spring washer and nut to securely fasten the ground lug. Use petroleum jelly to coat the bolt/lug connection to prevent oxidization with time.

PLACEMENT AND MOUNTING:

In most applications, mounting the MX-1 module close to the amplifier is ideal. Once the mounting location is determined, mark the 4 mounting holes with a marker. Prior to pre-drilling the holes, ensure that there are dangers on the other side of the metal. Once the holes have been pre-drilled, clean the metal shavings from the area and mount the MX-1 into location.



MX-1 FEATURE DESCRIPTIONS

SUBWOOFER INPUT LEVEL:

Variable from 40Volts to 4Volts. This control is used to match the output signal level from your headunit.

PARAMETRIC BASS EQ:

An incredible feature that allows for you to select a specific frequency, select a level of boost, and determine how wide the span of the boost will be.

- ***BOOST:***

Variable from 0dB to +10dB. At 0, the PARAMETRIC BASS EQ is OFF.

- ***BANDWIDTH:***

Variable from Narrow(all the way to the Left) to Wide(all the way to the Right). Narrow will focus on your selected FREQUENCY of BOOST and bleed into less frequencies. As you turn the potentiometer to the right, you increase the range of frequencies being boosted above and below your selected BOOST FREQUENCY.

- ***FREQUENCY:***

Variable from 30Hz to 100Hz. Use your potentiometer to select the center FREQUENCY to be boosted with the PARAMETRIC BASS EQ feature.

LOW PASS FILTER:

Variable from 35Hz to 250Hz. This filter features a 24dB per Octave roll off. This means that the LOW PASS FILTER has a steep cut-off and allows for very precise tuning. The LOW PASS FILTER allows frequencies below your selected setting to pass thru while cutting out frequencies above your selected setting.

SUBSONIC FILTER:

Variable from 15Hz to 35Hz. This filter features a 24dB per Octave roll off. This means that the SUBSONIC FILTER has a steep cut-off and allows for very precise tuning. The SUBSONIC FILTER allows frequencies above your setting to pass thru while cutting out damaging and unwanted frequencies below your selected setting.

SUBWOOFER OUTPUT LEVEL:

Variable from 1Volt to 9Volts. This control is used to adjust signal output voltage to your amplifier. Use caution when adjusting the signal output to be provided to your amplifier as you can damage your amplifier if you provide more signal than your amplifier is rated to handle.

MX-1 FEATURE DESCRIPTIONS

HIGH LEVEL FRONT(F) & REAR(R) INPUT CONTROL:

Variable from 40Volts to 4Volts. This control is used to match the output signal level from your headunit to your Front and Rear speakers.

SUBWOOFER INPUT MODE SELECTOR:

This switch allows for your to select 4 CH MONO to sum the input signal from the Front and Rear channels when a factory subwoofer is not present for signal or HIGH LEVEL when a factory subwoofer output is available for signal.

FRONT HIGH PASS FILTER:

Variable from 15Hz to 200Hz. This filter features a 12dB per Octave roll off. This means that the FRONT HIGH PASS FILTER has a gradual roll-off and allows for smooth cutoff. The FRONT HIGH PASS FILTER allows frequencies above your selected setting to pass thru while cutting out frequencies below your selected setting for the front speakers.

REAR HIGH PASS FILTER:

Variable from 15Hz to 200Hz. This filter features a 12dB per Octave roll off. This means that the REAR HIGH PASS FILTER has a gradual roll-off and allows for smooth cutoff. The REAR HIGH PASS FILTER allows frequencies above your selected setting to pass thru while cutting out frequencies below your selected setting for the rear speakers.

FRONT & REAR STEREO OUTPUT LEVEL:

Variable from 4Volts to 9Volts. This control is used to adjust signal output voltage to your amplifier. Use caution when adjusting the signal output to be provided to your amplifier as you can damage your amplifier if you provide more signal than your amplifier is rated to handle.

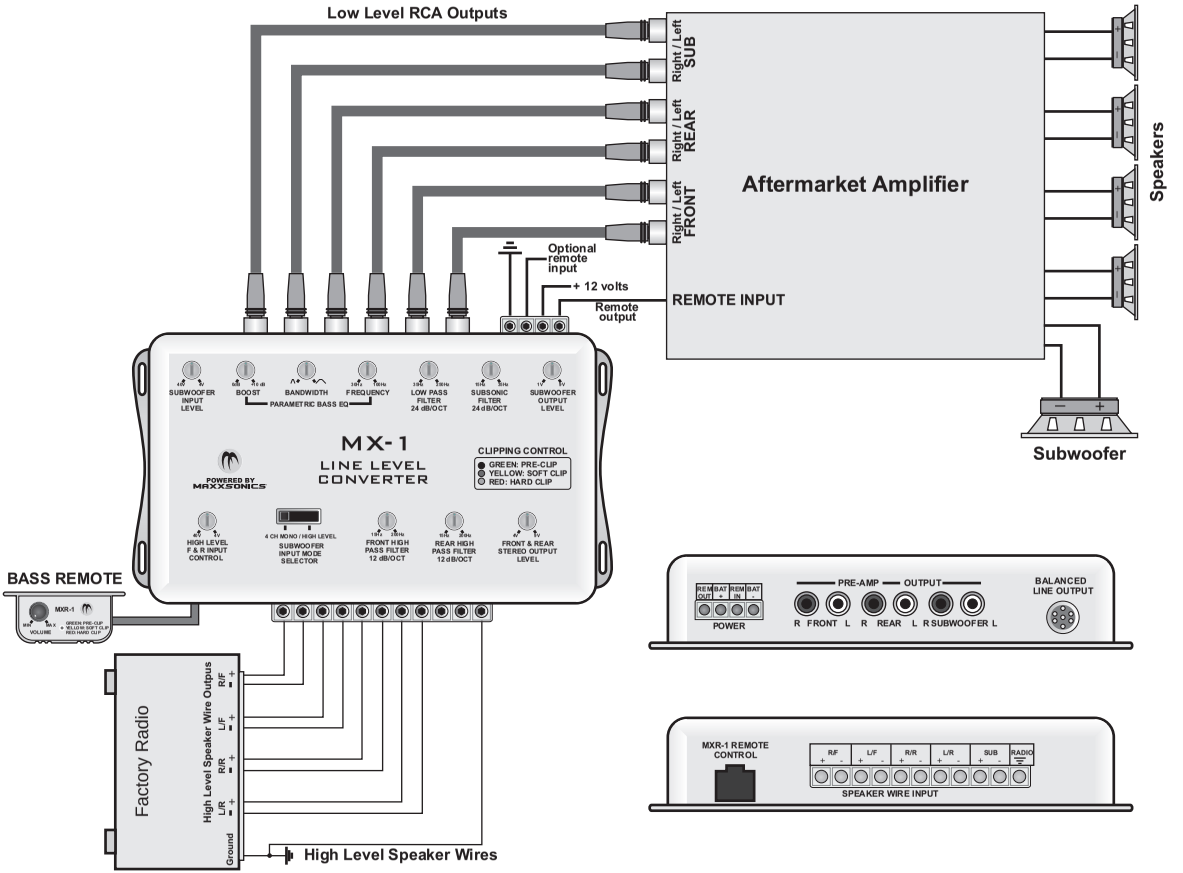
CLIPPING CONTROL: While adjusting the headunit, MX-1, or amplifiers, the CLIPPING CONTROL LED may illuminate in one of the following colors to alert you of an existing condition. These indicators give the user a chance to identify incorrect settings or high distortion before it is damaging to the equipment allowing them to correct the volume or settings.

- ***GREEN:*** Indicates a Pre-Clip condition, which is safe and normal operation.

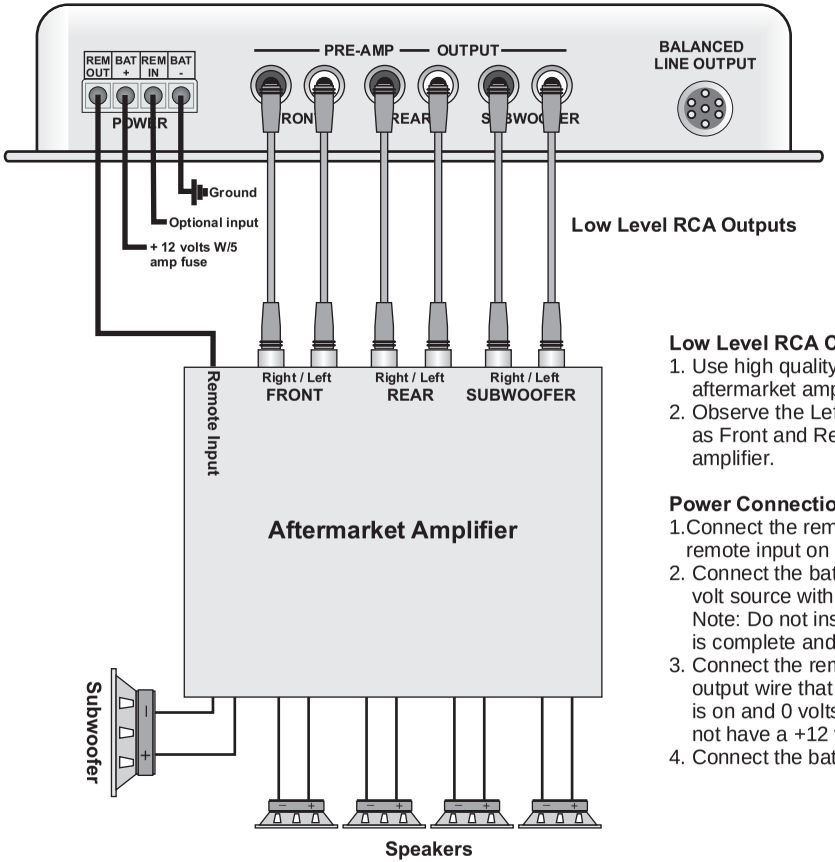
- ***YELLOW:*** Indicates a Soft-Clip condition, which is safe and normal operation, but you are close to a hard clip.

- ***RED:*** Indicates a Hard-Clip condition which is potentially damaging to the MX-1, amplifiers, speakers and subwoofers in the system. Evaluate and adjust crossovers and Levels so that this condition is not present.

MX-1 Main Diagram



MX-1 Connecting Low Level RCA Cables To Amplifier



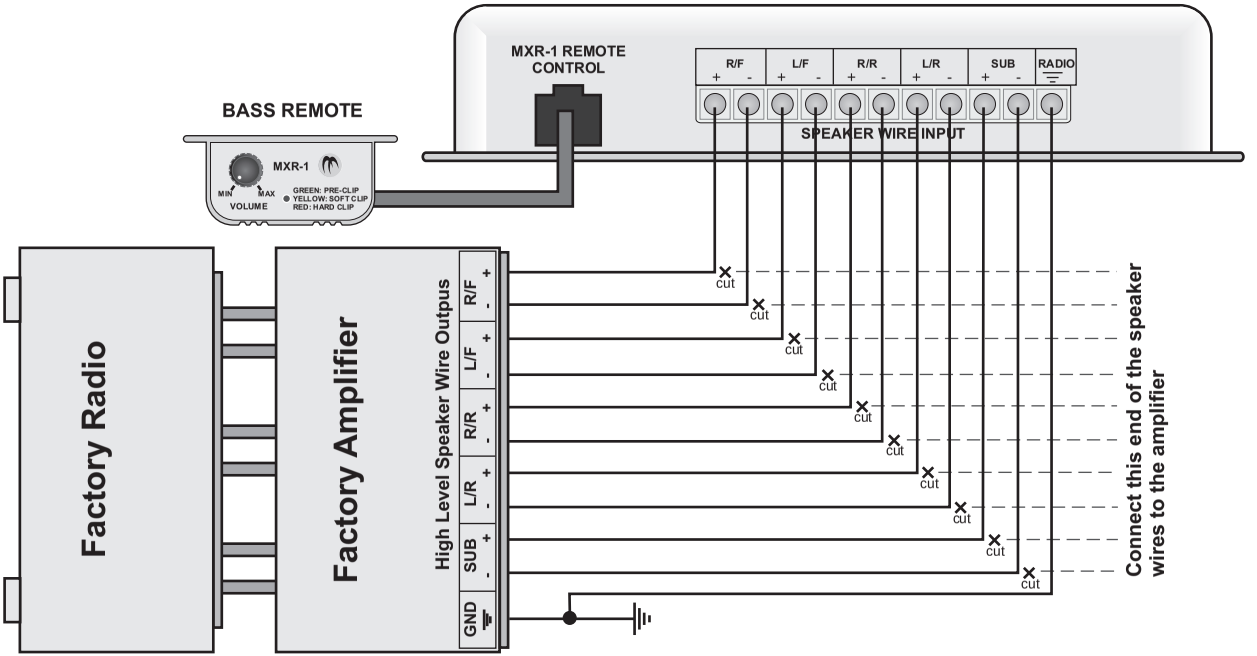
Low Level RCA Connections

1. Use high quality RCA cables to connect the MX-1 to the aftermarket amplifier per the diagram on this page.
2. Observe the Left (white) and Right (red) polarity as well as Front and Rear on both MX-1 and the aftermarket amplifier.

Power Connections

1. Connect the remote (REM OUT) output of the MX-1 to the remote input on the aftermarket amplifier.
2. Connect the battery (BAT+) terminal to a constant +12 volt source with a 5 amp in-line fuse (not supplied). Note: Do not install the fuse until the entire installation is complete and you are ready to test.
3. Connect the remote (REM IN) terminal to the radio output wire that provides a +12 volt output when the radio is on and 0 volts when the radio is off. If the radio does not have a +12 volt output, do not use this terminal.
4. Connect the battery (BAT -) to chassis ground.

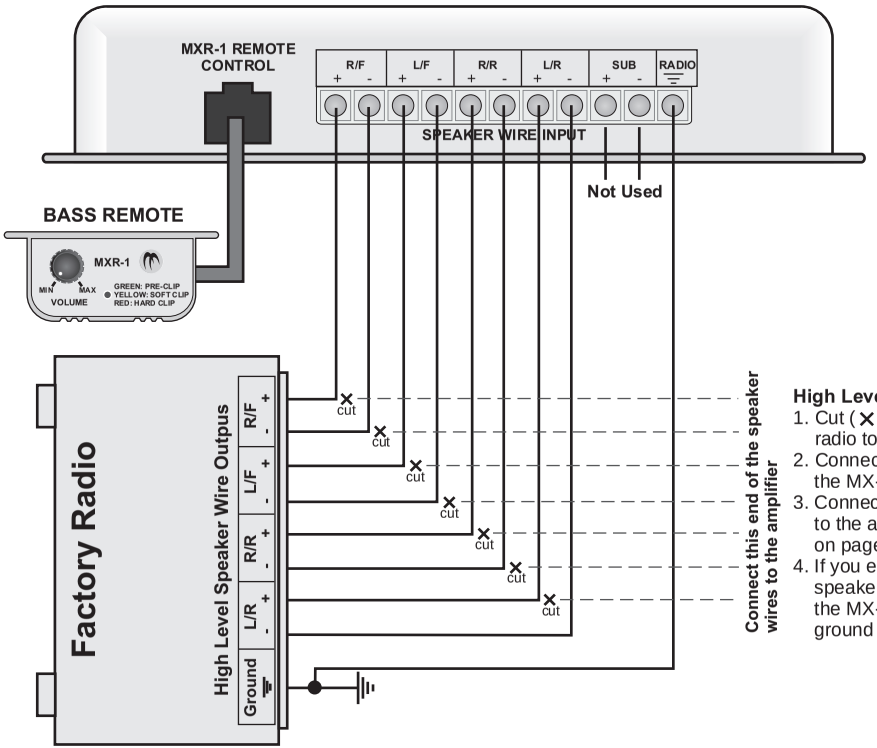
MX-1 Connecting High Level Speaker Wires (with factory amp)



High Level Speaker Wire Connections

1. Cut (×)the factory amplifier speaker wires coming from the amp to the speakers in half.
2. Connect the speaker wires from the amp to the MX-1 as show in the diagram on this page.
3. Connect the other end of wires from the speakers to the aftermarket amplifier as shown in the diagram on page ?
4. If you experience audible noise (distortion) in the speakers upon completion of the installation, connect the MX-1 “Radio” (⏚)ground to the factory radio ground wire as shown above.

MX-1 Connecting High Level Speaker Wires (no factory amp)



High Level Speaker Wire Connections

1. Cut (✕) the factory radio speaker wires from the radio to the speakers in half.
2. Connect the speaker wires from the radio side to the MX-1 color coded wires as shown in the diagram.
3. Connect the other end of the wires from the speakers to the aftermarket amplifier as shown in the diagram on page ?
4. If you experience audible noise (distortion) in the speakers upon completion of the installation, connect the MX-1 "Radio ⏚" ground wire to the factory radio ground wire as shown above.

MX-2 FEATURE DESCRIPTIONS

HIGH LEVEL FRONT(F) & REAR(R) INPUT CONTROL:

Variable from 40Volts to 4Volts. This control is used to match the output signal level from your headunit to your Front and Rear speakers.

FRONT HIGH PASS FILTER:

Variable from 15Hz to 200Hz. This filter features a 12dB per Octave roll off. This means that the FRONT HIGH PASS FILTER has a gradual roll-off and allows for smooth cutoff. The FRONT HIGH PASS FILTER allows frequencies above your selected setting to pass thru while cutting out frequencies below your selected setting for the front speakers.

REAR HIGH PASS FILTER:

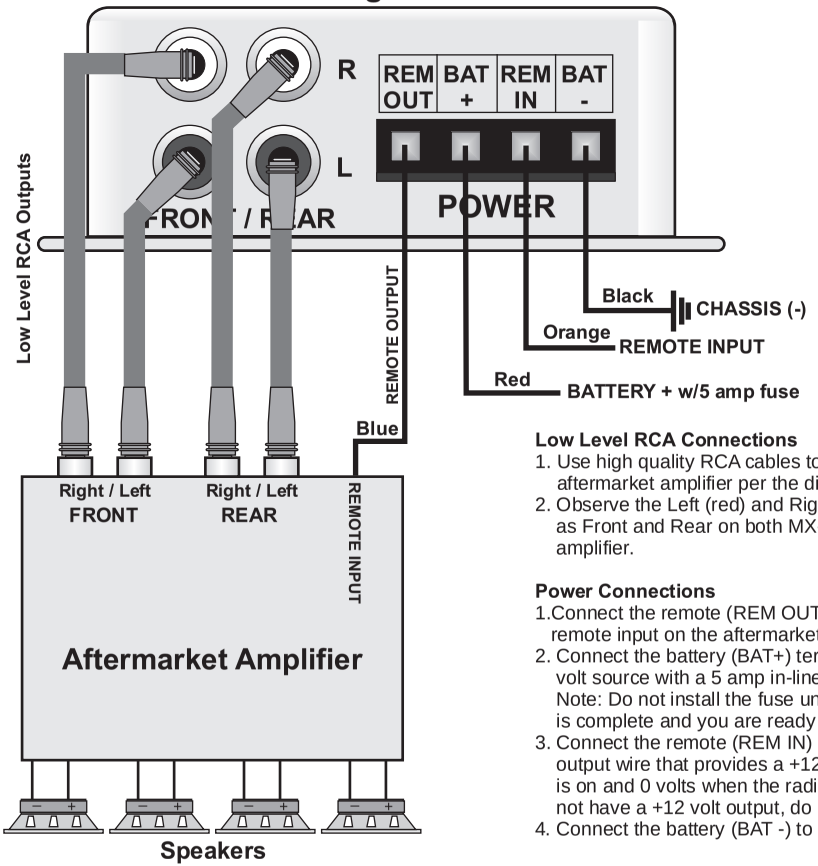
Variable from 15Hz to 200Hz. This filter features a 12dB per Octave roll off. This means that the REAR HIGH PASS FILTER has a gradual roll-off and allows for smooth cutoff. The REAR HIGH PASS FILTER allows frequencies above your selected setting to pass thru while cutting out frequencies below your selected setting for the rear speakers.

FRONT & REAR STEREO OUTPUT LEVEL:

Variable from 4Volts to 9Volts. This control is used to adjust signal output voltage to your amplifier. Use caution when adjusting the signal output to be provided to your amplifier as you can damage your amplifier if you provide more signal than your amplifier is rated to handle.

MX-2 Main Diagram

MX-2 Connecting Low Level RCA Cables To Amplifier



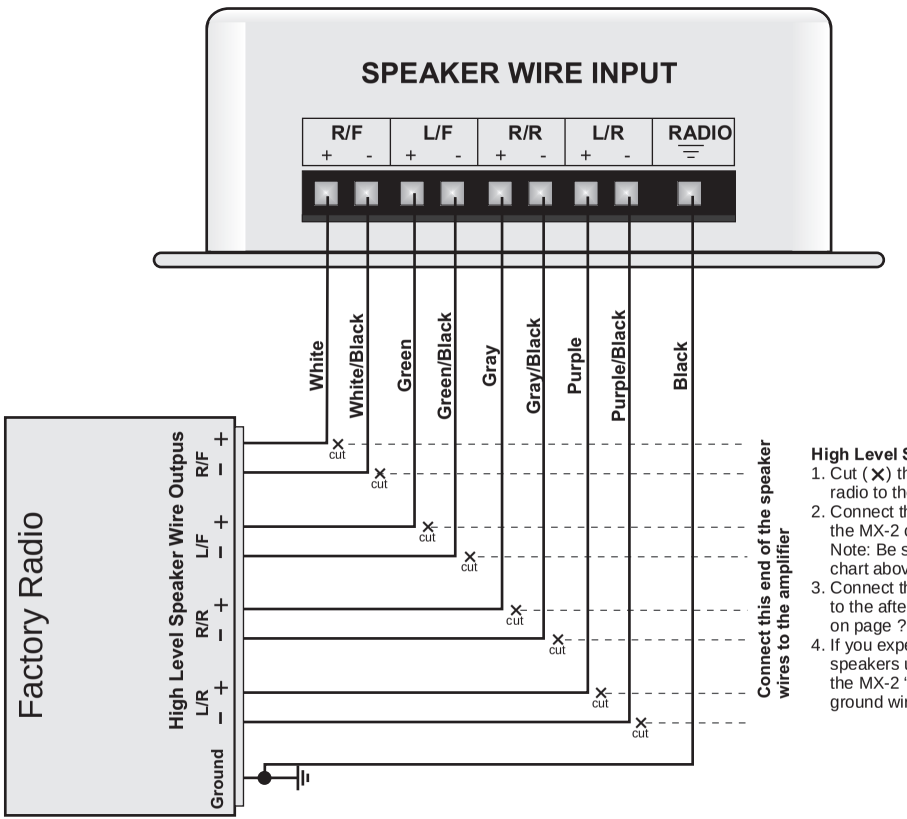
Low Level RCA Connections

1. Use high quality RCA cables to connect the MX-1 to the aftermarket amplifier per the diagram on this page.
2. Observe the Left (red) and Right (white) polarity as well as Front and Rear on both MX-2 and the aftermarket amplifier.

Power Connections

1. Connect the remote (REM OUT) output of the MX-2 to the remote input on the aftermarket amplifier.
2. Connect the battery (BAT+) terminal to a constant +12 volt source with a 5 amp in-line fuse (not supplied). Note: Do not install the fuse until the entire installation is complete and you are ready to test.
3. Connect the remote (REM IN) terminal to the radio output wire that provides a +12 volt output when the radio is on and 0 volts when the radio is off. If the radio does not have a +12 volt output, do not use this terminal.
4. Connect the battery (BAT -) to chassis ground.

MX-2 Connecting High Level Speaker Wires (no factory amp)



Color Code / Polarity Chart

White: Right Front + White/Black: Right Front -
Green: Left Front + Green/Black: Left Front -
Gray: Right Rear + Gray/Black: Right Rear -
Purple: Left Rear + Purple/Black: Left Rear -
Black: Radio Ground

High Level Speaker Wire Connections

1. Cut (✕) the factory radio speaker wires from the radio to the speakers in half.
2. Connect the speaker wires from the radio side to the MX-2 color coded wires as shown in the diagram Note: Be sure to follow the wire color code and polarity chart above.
3. Connect the other end of the wires from the speakers to the aftermarket amplifier as shown in the diagram on page ?
4. If you experience audible noise (distortion) in the speakers upon completion of the installation, connect the MX-2 “Radio” ground wire to the factory radio ground wire as shown above.

MX-3 FEATURE DESCRIPTIONS

PARAMETRIC BASS EQ:

An incredible feature that allows for you to select a specific frequency, select a level of boost, and determine how wide the span of the boost will be.

- ***BOOST:***

Variable from 0dB to +10dB. At 0, the PARAMETRIC BASS EQ is OFF.

- ***BANDWIDTH:***

Variable from Narrow(all the way to the Left) to Wide(all the way to the Right). Narrow will focus on your selected FREQUENCY of BOOST and bleed into less frequencies. As you turn the potentiometer to the right, you increase the range of frequencies being boosted above and below your selected BOOST FREQUENCY.

- ***FREQUENCY:***

Variable from 30Hz to 100Hz. Use your potentiometer to select the center FREQUENCY to be boosted with the PARAMETRIC BASS EQ feature.

LOW PASS FILTER:

Variable from 35Hz to 250Hz. This filter features a 24dB per Octave roll off. This means that the LOW PASS FILTER has a steep cut-off and allows for very precise tuning. The LOW PASS FILTER allows frequencies below your selected setting to pass thru while cutting out frequencies above your selected setting.

SUBSONIC FILTER:

Variable from 15Hz to 35Hz. This filter features a 24dB per Octave roll off. This means that the SUBSONIC FILTER has a steep cut-off and allows for very precise tuning. The SUBSONIC FILTER allows frequencies above your setting to pass thru while cutting out damaging and unwanted frequencies below your selected setting.

SUBWOOFER INPUT LEVEL:

Variable from 9Volts to 0.2Volts. This control is used to match the output signal level from your headunit.

SUBWOOFER OUTPUT LEVEL:

Variable from 4Volts to 9Volts. This control is used to adjust signal output voltage to your amplifier. Use caution when adjusting the signal output to be provided to your amplifier as you can damage your amplifier if you provide more signal than your amplifier is rated to handle.

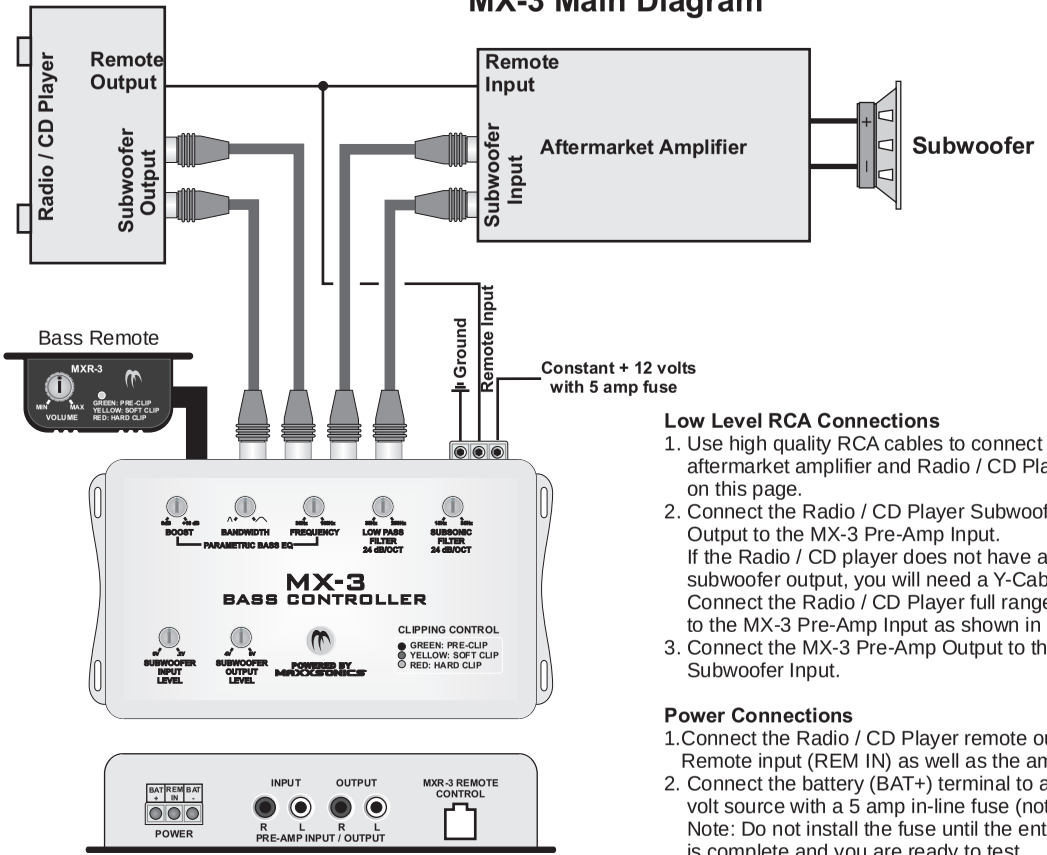
CLIPPING CONTROL: While adjusting the headunit, MX-3, or amplifiers, the CLIPPING CONTROL LED may illuminate in one of the following colors to alert you of an existing condition. These indicators give the user a chance to identify incorrect settings or high distortion before it is damaging to the equipment allowing them to correct the volume or settings.

- ***GREEN:*** Indicates a Pre-Clip condition, which is a safe and normal operation.

- ***YELLOW:*** Indicates a Soft-Clip condition, which is a safe and normal operation, but you are close to a hard clip.

- ***RED:*** Indicates a Hard-Clip condition which is potentially damaging to the MX-3, amplifiers, speakers and subwoofers in the system. Evaluate and adjust crossovers and Levels so that this condition is not present.

MX-3 Main Diagram



Low Level RCA Connections

1. Use high quality RCA cables to connect the MX-3 to the aftermarket amplifier and Radio / CD Player per the diagram on this page.
2. Connect the Radio / CD Player Subwoofer (mono) Output to the MX-3 Pre-Amp Input.
   If the Radio / CD player does not have a designated subwoofer output, you will need a Y-Cable adaptor to Connect the Radio / CD Player full range stereo output to the MX-3 Pre-Amp Input as shown in the diagram.
3. Connect the MX-3 Pre-Amp Output to the amplifier Subwoofer Input.

Power Connections

1. Connect the Radio / CD Player remote output to the MX-3 Remote input (REM IN) as well as the amplifier remote input.
2. Connect the battery (BAT+) terminal to a constant +12 volt source with a 5 amp in-line fuse (not supplied).
   Note: Do not install the fuse until the entire installation is complete and you are ready to test.
3. Connect the ground (BAT -) terminal to chassis ground.

MX-4 FEATURE DESCRIPTIONS

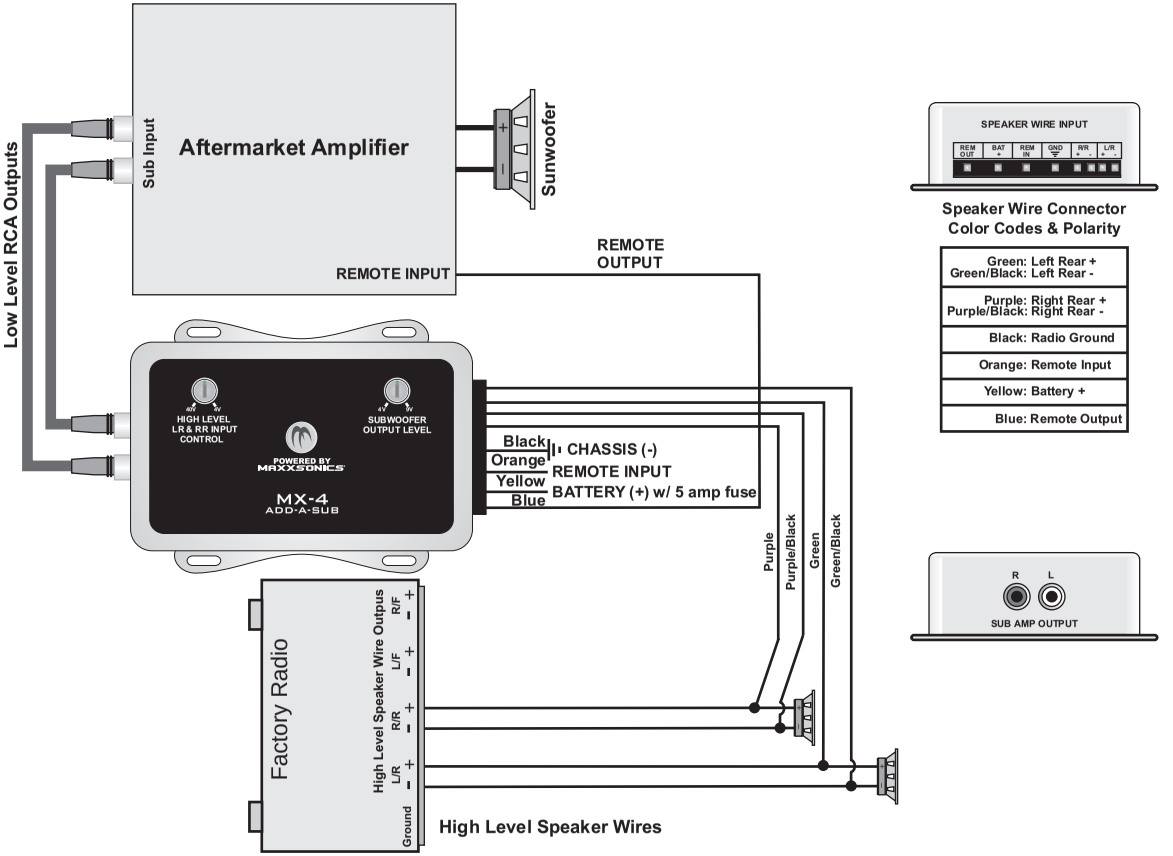
SUBWOOFER OUTPUT LEVEL:

Variable from 4Volts to 9Volts. This control is used to adjust signal output voltage to your amplifier. Use caution when adjusting the signal output to be provided to your amplifier as you can damage your amplifier if you provide more signal than your amplifier is rated to handle.

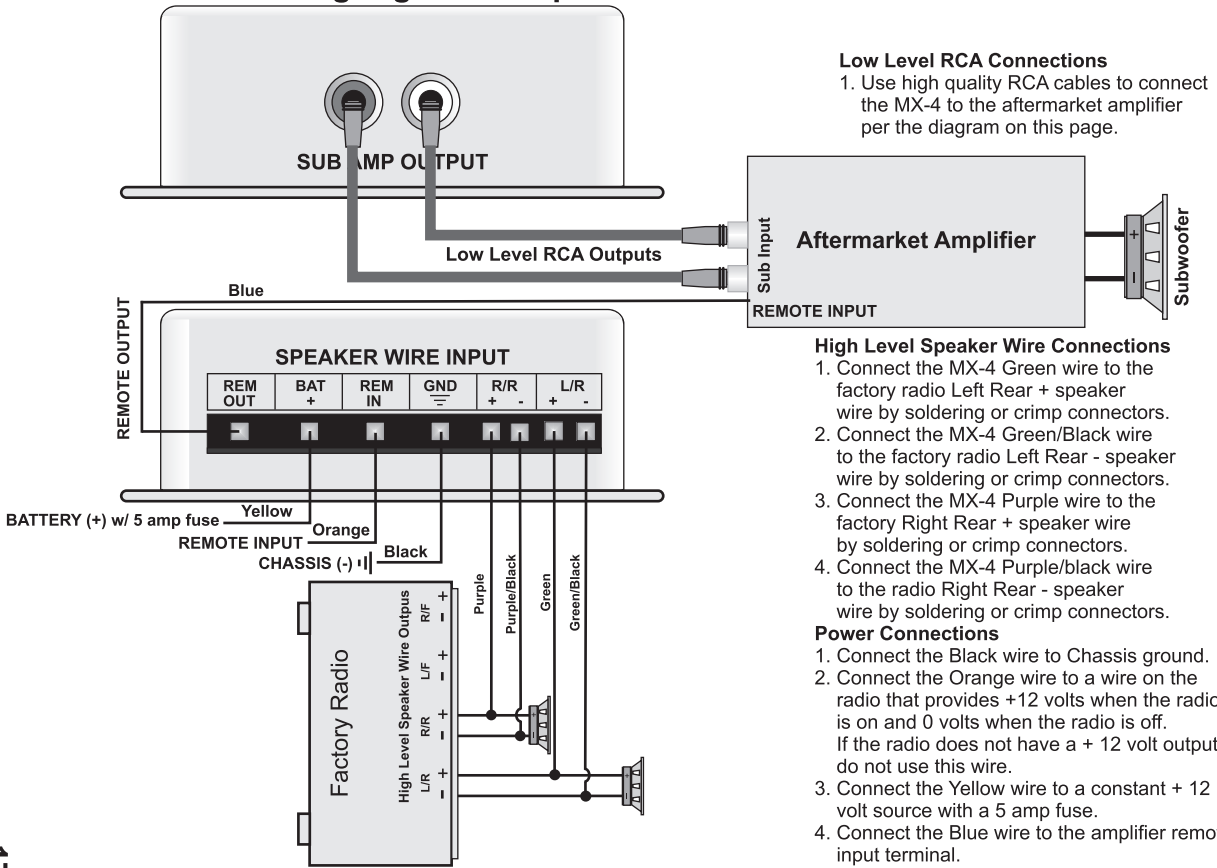
SUBWOOFER INPUT LEVEL:

Variable from 40Volts to 4Volts. This control is used to match the output signal level from your headunit.

MX-4 Main Diagram



MX-4 Connecting High Level Speaker Wires And Low Level RCA Cables



Low Level RCA Connections

1. Use high quality RCA cables to connect the MX-4 to the aftermarket amplifier per the diagram on this page.

High Level Speaker Wire Connections

1. Connect the MX-4 Green wire to the factory radio Left Rear + speaker wire by soldering or crimp connectors.
2. Connect the MX-4 Green/Black wire to the factory radio Left Rear - speaker wire by soldering or crimp connectors.
3. Connect the MX-4 Purple wire to the factory Right Rear + speaker wire by soldering or crimp connectors.
4. Connect the MX-4 Purple/black wire to the radio Right Rear - speaker wire by soldering or crimp connectors.

Power Connections

1. Connect the Black wire to Chassis ground.
2. Connect the Orange wire to a wire on the radio that provides +12 volts when the radio is on and 0 volts when the radio is off. If the radio does not have a + 12 volt output, do not use this wire.
3. Connect the Yellow wire to a constant + 12 volt source with a 5 amp fuse.
4. Connect the Blue wire to the amplifier remote input terminal.

TROUBLESHOOTING A SYSTEM

The key to finding the problem in a troubled sound system is to isolate parts of that system in a logical fashion to track down the fault.

Description of the Diagnostic system built into the MX-1 & MX-3:
1. Clipping Indicator: Red Illumination when signal is clipped.
2. Normal Operation: Green Illumination, when signal is unclipped up to 9volts.

The diagnostic system will not shut down the MX accessories or the amplifier(s), although the amplifier(s) own protection circuitry may shut the amplifier(s) down should a fault status occur. At which time you will need to consult the owners manual for that particular amplifier.

Low output power
1 - Check that level controls have been set up properly.
2 - Make sure that the battery voltage, as measured at the amplifier's and MX accessories +12 volt and ground terminals, is 11 volts or more.
3 - Check all +12 volt and ground connections.

Fuses blowing
1 - Insure that the voltage to the unit does not exceed 15 volts.
2 - A short on the main +12 volt cable from the battery to the vehicle chassis will cause the main fuse to blow.
3 - If the MX accessory is blowing fuses continually with only +12 volt, ground and remote leads connected, the unit may be faulty.

System does not turn on
1 - Check all fuses.
2 - Check all connections.
3 - Measure the +12 volt and remote turn on voltages at the amplifier and MX terminals. If these are non existent or low, take voltage measurements at fuse holders, distribution blocks, the head unit's +12 volt and remote leads to localize the problem.

Noise problems
System noise can be divided into two categories, hiss, and electrical interference.

Hiss, or white noise
1 - High levels of white noise usually occur when level controls are turned up too high - readjust according to the procedures in the appropriate application section.
2 - Another major problem that can cause excessive hiss, is a noisy head unit - unplug the MX input wires, and if the hiss level reduces, the source unit is at fault.

Electrical interference
The inside of an automobile is a very hostile electrical environment. The multitude of electrical systems, such as the ignition system, alternator, fuel pumps, air conditioners, to mention just a few, create radiated electrical fields, as well as noise on the +12 volt supply and ground. To try and eliminate this noise, run a wire from the radio ground wire to the ground input on the MX unit.

A ticking or whine that changes with engine RPM:
1 - This problem could be caused by radiation pickup of RCA cables that are too close to a fuel pump or a distributor.
2 - Check that the head unit ground is connected straight to the vehicle chassis, and does not use factory wiring for ground.
3 - Try to supply the head unit with a clean +12 volt supply directly from the battery +, instead of using a supply from the in dash wiring/fusebox.

A constant whine:
This type of noise can be more difficult to pinpoint, but is usually caused by some kind of instability, causing oscillations in the system.
1 - Check all connections, especially for good grounds.
2 - Make sure that no speaker leads are shorting to exposed metal on the vehicle chassis.
3 - RCA cables are notorious for their problematic nature, so check that these are good, in particular the shield connections.

Maxxsonics Limited Warranty

As the manufacturer of Maxxsonics, MB Quart, Hifonics, Crunch and Autotek car audio products, Maxxsonics USA Inc. Warrants to the original consumer purchaser the amplifier to be free from defects in material and workmanship for one (1) Year from date of purchase.

All other parts and accessories of the system are warrantied to be free from defects in material and workmanship for one (1) year from date of purchase. Maxxsonics will repair or replace at it's option and free of charge during the warranty period, any system component that proves defective in materials and workmanship under normal installation, use and service provided that the product is returned to the authorized Maxxsonics dealer from where it was purchased. A photo copy of the original receipt must accompany the product being returned.

Valid purchase receipts will contain the name and address of the authorized reseller.

Any damage to the product as a result of misuse, abuse, accident, incorrect wiring, improper installation, alteration of date code or bar code labels, revolution, natural disaster, or any sneaky stuff because someone messed up, repair or alteration out side of our factory or authorized service centers and any thing else you have done that you should not have done is not covered.

This warranty is limited to defective parts and specifically excludes any incidental or consequential damages connected therewith. This warranty is not to be construed as an insurance policy.

Warranty on installation labor, removal, re-installation and freight charges are not the responsibility of Maxxsonics USA Inc.

Warranty products damaged as a result of insufficient or improper packing materials are not covered by this limited warranty and such damaged product will be returned "as is" at the expense of the owner.

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